



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,153	04/26/2002	Taisto Yrjana	OUTO 2408	8187
7812	7590	12/05/2003	EXAMINER	
SMITH-HILL AND BEDELL 12670 N W BARNES ROAD SUITE 104 PORTLAND, OR 97229			WILSON, GREGORY A	
			ART UNIT	PAPER NUMBER
			3749	

DATE MAILED: 12/05/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/049,153

Applicant(s)

YRJANA ET AL.

Examiner

Gregory A. Wilson

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-22, 24, 26-34, 36 and 38-40 is/are rejected.
- 7) ☒ Claim(s) 23, 25, 35 and 37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

**Claims 17-20, 26, 29-31, 38, and 40** are rejected under 35 U.S.C. 102(e) as being anticipated by **Ruiter (6,471,509)**. **Ruiter** discloses a support apparatus for supporting material (20) and includes an elongate gas control element (support construction 3) which is curved over its' entire surface having a first and second guide surface (SEE indication of element 25) having a center of curvature that is farther than the central axis of the support elements from the central axis of the gas control element, a flow through type cooling agent (SEE column 5, lines 12-20), a first and second

substantially cylindrical support elements (10 & 11) of substantially equal diameter (SEE Figure 2), and having a central axis which is parallel to the central axis of gas control element (3) wherein the gas control element is located between the support elements with the guide surfaces facing toward the support elements (SEE Figure 2). The guide surfaces are spaced from the support elements and are structurally capable of supporting a gas flow channel between the support element and the gas control element. This gas flow channel has a width that increases in distance from the common plane (SEE distance between elements 10 and 25). The gas control element which may constitute part of a seal, includes two lobes (Figure 2) that extend to opposite respective sides of a common plane, radially from the central axis and which structurally meet the limitations as defined by the claimed equation.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 17-22, 24, 26-34, 36, and 38-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Blomqvist et al (4,538,986)**. **Blomqvist et al** discloses a support apparatus (unnumbered) (SEE Figures 3 & 4) for a furnace (13) and includes an elongate gas control element (5) curved over its' entire surface, which constitutes part of a seal (Figure 3), having first and second guide surfaces (space between

element 5 & 7) having a center of curvature that is farther than the central axis of the first support element from the central axis of the gas control element, first and second cylindrical support elements (7), its' central axis being parallel to the central axis of gas control element and spaced therefrom; the gas control element is located between the support elements with the first and second guide surfaces of the gas control element facing towards the first and second support elements, the guide surfaces are spaced from the support elements and are capable of providing a flow channel between each support element and the gas control element and enable flow used in treatment of the material between the support element and the control element, the gas control element includes two lobes (SEE Figures 3 & 4) that extend to opposite respective sides of the common plane of the gas control element and extend radially from its' central axis by a distance which structurally is capable of meeting the requirements of the claimed equation; the gas flow channel slightly increases in width (Figure 3) with distance from the common plane. The prior art furthermore includes at least two sealing elements (9) wherein the gas control element is between the seals and flow can be directed underneath the material to be supported. A cooling agent is conducted through pipes (10) which inherently go through the seals (9) (SEE column 2, lines 35-43 and Figure 1), and also provide cooling to each support element and gas control element. **Blomqvist et al** does not particularly recite that the cooling fluid is a gas, but instead teaches cooling water. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to substitute a cooling gas for the cooling water, since

Art Unit: 3749

it has been held to be within the general skill of a worker in the art that a cooling gas or cooling water are well known fluids suitable for cooling in a furnace environment.

***Allowable Subject Matter***

**Claims 23, 25, 35, and 37** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

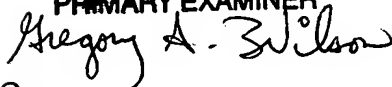
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory A. Wilson whose telephone number is (703) 308-1239. The examiner can normally be reached on 7 am - 4:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on (703)308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7764.

Art Unit: 3749

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

GREGORY WILSON  
PRIMARY EXAMINER

A handwritten signature in cursive script that reads "Gregory A. Wilson".

Gaw

November 22, 2003